

**AMENDMENTS TO THE CLAIMS:**

***This listing of claims will replace all prior versions, and listings,  
of claims in the application:***

Claims 1-10 (Canceled)

11. (Currently Amended) A photoelectric conversion device, comprising:  
a photoelectric conversion layer and a backside electrode layer stacked in  
this order on ~~the substrate of claim 1~~ a structure, wherein  
the structure comprises:  
a substrate; and  
a transparent electrode layer formed on at least a part of a surface  
region of the substrate, the transparent electrode layer having at least an  
opening portion.

12. (Currently Amended) A stacked photoelectric conversion device,  
comprising:  
a plurality of photoelectric conversion layers and a backside electrode  
layer stacked in this order on ~~the substrate of claim 1,~~ a structure; and  
a first intermediate layer sandwiched between at least a pair of adjacent  
two photoelectric conversion layers, wherein  
the structure comprises:  
a substrate; and

a first transparent electrode layer formed on at least a part of a surface region of the substrate, the transparent electrode layer having at least an opening portion.

13. (Original) The device of claim 12, wherein the first intermediate layer has at least an opening portion, and the pair of the photoelectric conversion layers sandwiching the first intermediate layer therebetween come into contact with each other through the opening portion.

14. (Currently Amended) The device of claim ~~13~~ 12, wherein the first intermediate layer has at least an opening portion, the device further comprising a second intermediate layer between the first intermediate layer and the photoelectric conversion layer thereon, the second intermediate layer covering the opening portion of the first intermediate layer.

15. (Original) The device of claim 14, wherein the second intermediate layer has a thinner film thickness than that of the first intermediate layer.

Claims 16-24 (Canceled)

25. (New) The device of claim 11, wherein  
the substrate is a transparent substrate such that the transparent  
electrode layer is formed on the surface region of the transparent substrate,  
and

the opening portion is one of a plurality of opening portions that the  
transparent electrode layer has, each opening portion exposing a part of the  
surface region of the transparent substrate.

26. (New) The device of claim 25, wherein the transparent electrode  
layer has a texture structure on its surface.

27. (New) The device of claim 25, wherein  
a haze index at 550nm wavelength of the transparent electrode layer  
measured ranges is substantially at least 65% and  
a light transmittance of a combination of the transparent substrate and  
the transparent electrode layer is substantially at least 78%.

28. (New) The device of claim 25, wherein  
an aperture ratio of the transparent electrode layer substantially ranges  
between 0.8% to 37%, the aperture ratio being defined as a sum of areas of the  
opening portions over a surface area divided by the surface area, the surface

area being an area of the surface region of the transparent substrate on which the transparent electrode layer is formed, and

wherein an average radius of the opening portions over the surface area is substantially equal to or less than  $3.13\text{ }\mu\text{m}$ , in which a radius  $r_n$  of an  $n$ 'th opening portion is calculated by a formula  $r_n = (S_n/\pi)^{1/2}$ ,  $n$  being an integer from 1 to  $k$  in which  $k$  is a number of the opening portions, and  $S_n$  being an area of the  $n$ 'th opening portion.

29. (New) The device of claim 25, wherein the opening portion does not electrically separate the transparent electrode layer.

30. (New) The device of claim 25, wherein the opening portions do not include grooves for separating a transparent electrode provided for forming an integrated structure in which a plurality of photoelectric conversion cells are electrically connected in series.

31. (New) The device of claim 25, wherein the transparent electrode layer is a first transparent electrode layer, the device further comprising:

a second transparent electrode layer formed on the first transparent electrode layer so as to be formed in between the first transparent electrode layer and the photoelectric conversion layer, wherein

the second transparent electrode layer covers some or all of the opening portions.

32. (New) The device of claim 31, wherein a thickness of the second transparent electrode layer is less than a thickness of the first transparent electrode layer.

33. (New) The device of claim 31, wherein  
the thickness of the first transparent electrode layer ranges substantially between 500 nm and 1300 nm, and  
the thickness of the second transparent electrode layer ranges substantially between 10 nm and 100 nm.

34. (New) The device of claim 31, wherein a synthesized sheet resistance of the first and the second transparent electrode substantially ranges between  $5 \Omega/\square$  and  $25 \Omega/\square$ .

35. (New) The device of claim 11, wherein the substrate has a metal film, a transparent conductive film, or an insulating film on the surface thereof.

36. (New) The device of claim 25, wherein the photoelectric conversion layer is a first photoelectric conversion layer, the device further comprising:

an intermediate layer formed on the first photoelectric conversion layer;  
and

a second photoelectric conversion layer formed on the intermediate layer.

37. (New) The device of claim 36, wherein

the opening portions of the transparent electrode layer are first opening portions, and

the intermediate layer has a plurality of second opening portions, each second opening portion exposing a part of the first photoelectric conversion layer.

38. (New) The device of claim 37, wherein the first and second photoelectric conversions layers are in contact through some or all second opening portions.

39. (New) The device of claim 37, wherein the intermediate layer is a first intermediate layer, the device further comprising:

a second intermediate layer formed on the first intermediate layer so as to be formed in between the first intermediate layer and the second photoelectric conversion layer, wherein

the second intermediate layer covers some or all of the second opening portions.

40. (New) The device of claim 36, wherein an aperture ratio of the intermediate layer substantially ranges between 0.5% and 90%, the aperture ratio being defined as a sum of widths of the intermediate layer opening portions over a cross section divided by a width of the cross section.

41. (New) The device of claim 40, wherein the aperture ratio of the intermediate layer substantially ranges between 16% and 63%.

42. (New) The device of claim 36, wherein the intermediate layer has a texture structure on its surface.

43. (New) The device of claim 36, wherein a short circuit current density of the first and second photoelectric conversion layers are substantially equal.